

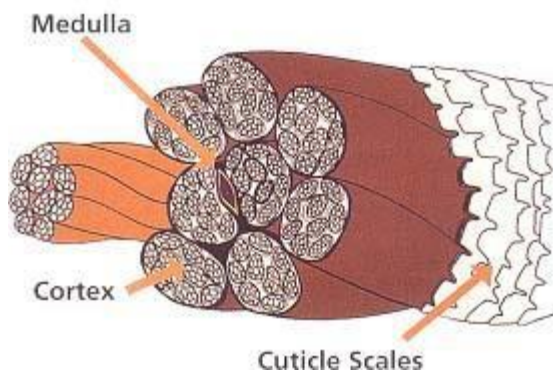
The Hair Shaft

The hair shaft protrudes from the top layer of skin (epidermis). It comprises three layers: the cuticle, the cortex, and the medulla.

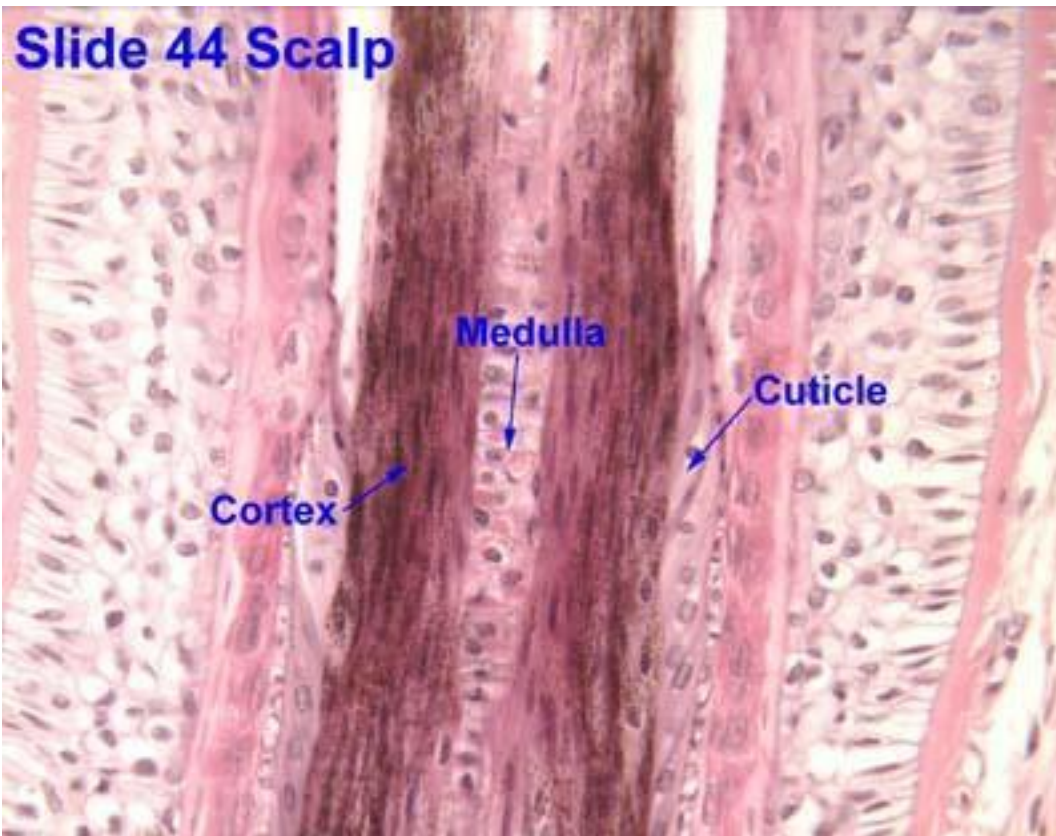
The Cuticle is the outer covering of the hair shaft. It consists of hard, flattened, overlapping, colourless, scale-like cells. The scales are translucent, allowing the colour pigments in the cortex to be seen. The cuticle scales point towards the tip of the hair and are made up of 4-10 encircling layers. The Cuticle is best described as the outer bark of a tree. The purpose is to protect the cortex from damage. The cuticle can be damaged by misuse of hairdressing chemicals and thermal styling services and other factors such as the weather.

The Cortex is the middle layer and makes up about 90% of the hairs bulk, and is important in determining physical properties such as elasticity, strength, and texture. It is made up of twisted cable bundles, or fibrils, which merge into one another. This is known as the polypeptide chain or helix coil. Although the cortex is strong, it cannot resist damage. The majority of hairdressing processes occur in the cortex, which also contains the hair's colour pigment, melanin.

The Medulla is the centre core or hollow of the hair. It serves no purpose in human hair and may be partially or fully absent from the hair shaft. It is made up of soft cells.



<http://www.headofhair.net/tag/medulla/>



http://www.ouhsc.edu/histology/Glass%20slides/44_12.jpg

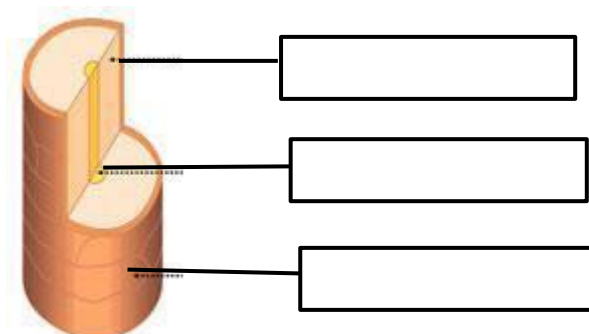
The outermost layer of the hair shaft is the

- ☐ Cortex.
- ☐ Cuticle.
- ☐ Medulla.

Use the words in the table below to identify the structure of the hair shaft.

Please label hair shaft

Medulla	Cortex	Cuticle
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Use the words in the table below to identify the structures of the hair and skin.

Hair bulb	Sweat gland	Hair shaft
Hair follicle	Sebum gland	

